

REMARKS

The application has been amended and is believed to be in condition for allowance.

Claim 3 has been amended to depend from claim 1 and thus remedy the stated basis of objection. Withdrawal of the object as to claim 3 is solicited.

Claim 13 has been amended to clarify the recitations and thus remedy the stated basis of objection. Withdrawal of the object as to claim 13 is solicited.

Claim 19 has been amended as kindly suggested in the Official Action.

Withdrawal of the Section 101 rejection is therefore solicited.

All the claims were rejected as anticipated by PUPPA 7,092,361.

Applicants respectfully disagree, and request reconsideration and allowance of all the claims.

As an initial matter, see BACKGROUND OF THE INVENTION of the present specification wherein it is disclosed "many of the communication formats were originally designed for traditional packet based transmission, where association to real time event typically lacked. An example of such a communication is the web pages and web surfing. Also many trusted application such as banking could be taken care with possible delays. Even the fastest data communication ways such as Asynchronous Transfer

Mode (ATM) were designed, despite of the ultimate data transfer speed, to quite delay tolerant environments. Lately the telecommunication industry has been highly focused on their leap towards using IP for telecommunication services. As one alternative, Multiprotocol Label Switching (MPLS) can be chosen as the bearer of IP, especially in large backbone networks."

The specification discusses the prior art noting that (emphasis added) "..., the MPLS carries the heritage of delay tolerant based data communication such as the ATM, despite offering a fast way to transfer data. Consequently, there are still some remains of the ATM in the MPLS. One example is the principal design for applications substantially based on non real time or alternatively expressed as delay tolerance. Examples of such approaches have been presented according to standardization specification drafts of the ITU-T: Y.1710 'Requirements for OAM functionality in MPLS networks' COM 13-14-E July 2002, Y.1711 'OAM mechanism for MPLS networks' COM 13-15-E July 2002, and Y.1720 'Protection Switching for MPLS networks' COM 13-R 14-E June 2001, all three incorporated herein as a reference, where Connectivity Verification (CV) packets are sent 1/s (1 per second). This standard solution provides a fault detection time of three seconds from the fault event."

"Existing MPLS Path failure-detecting mechanism can inform ... when defects on three consecutive CV packets have been detected. This means that it takes three seconds before a failure

alert for a Path error can be detected and sent further."

"A disadvantage ... Moreover, the switch-over time is not fast enough with substantially real-time based connections, where a switch-over is typically required in less than 50 ms. In view of various inherent limitations of communication and systems between computing devices, it would be desirable to avoid or mitigate these and other problems associated with prior art. Thus, there is a need to have a fault detection and switch-over functionality for real time application."

From the above, applicants have clearly characterized the prior art systems as non-real time, whereas the invention offers a real time solution.

See that claims 2-3 require that the interval for sending connectivity verification data information in the data communication comprises approximately one connectivity verification packet per 10 milliseconds or one connectivity verification packet per 15 milliseconds respectively.

There is no disclosure of the in lines 62-65 of column 1 or lines 33-35 of column 3. From the above, it is clear that the invention's improved times are not inherent in the prior art systems such as PUPPA.

PUPPA discloses an OAM based fault detection and switch-over method and system. Generally, PUPPA teaches a bridging system between ATM and MPLS systems, which system can relay fault detections between these two systems.

However, the teaching of PUPPA is not real time based. Indeed, there is no mention in PUPPA of real time communications. With real time based detection and switch-over, embodiments of the present invention can perform the fault detection and switch over in less than 50ms (claim 4).

Column 1, lines 62-65 do not make this disclosure as stated by the Official Action. To the contrary, PUPPA teaches (column 10, lines 4-13) an interval of "about one every second" for sending CV packets. Furthermore, the "debounce mechanism" enlarges this time for detecting and performing the switch-over, to enlarge the about one every second to considerably more than one second, e.g, to three seconds.

See PUPPA column 10, lines 4-13:

"In performing connectivity verification, CV frames should be received by MPLS OAM state machine 604 for CV failures periodically, about once every second. However, after a period of time has elapsed without receiving a CV frame, MPLS OAM state machine 604 for CV failures moves to Defect state 706. This time period may be configurable. A debounce mechanism is provided for CV frames by setting the period of time after which a CV failure is declared to a time longer than one second. In the embodiment, the time period is three seconds."

Thus, PUPPA does not teach the claim 1 recitation of "an interval for sending connectivity verification data information in the data communication is such that a real time

based data communication is achievable".

PUPPA therefore does not anticipate. Further, PUPPA does not render obvious the present invention as PUPPA can not be the basis for a real time based communications due to the inherent incompatibilities in the essential features PUPPA and real time execution.

Indeed, PUPPA clearly teaches away from the present invention in that PUPPA motivates and instructs one to non-real time based communications.

New claim 20 is based on the disclosure that begins on specification page 3, line 20.

This claim follows the above discussion and requires the interval in which the connection fault occurs, the connection fault is detected, and the switch-over in the data communication is triggered to occur is less than 50 ms, with connectivity verification data information in the form of connectivity verification packets being sent one connectivity verification packet per 15 ms.

Neither part of this claim is taught nor suggested by PUPPA.

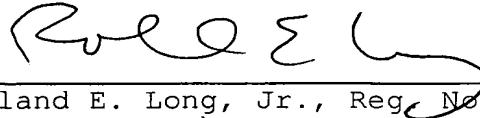
Reconsideration and allowance of all the claims are therefore respectfully requested.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any

overpayment to Deposit Account No. 25-0120 for any additional
fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

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